

Trend Study 14-22-99

Study site name: Wild Cow Point .

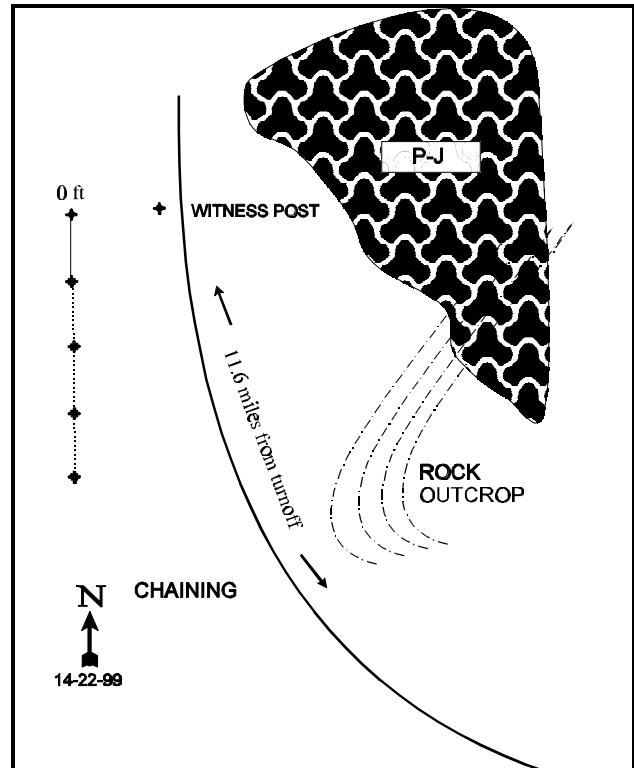
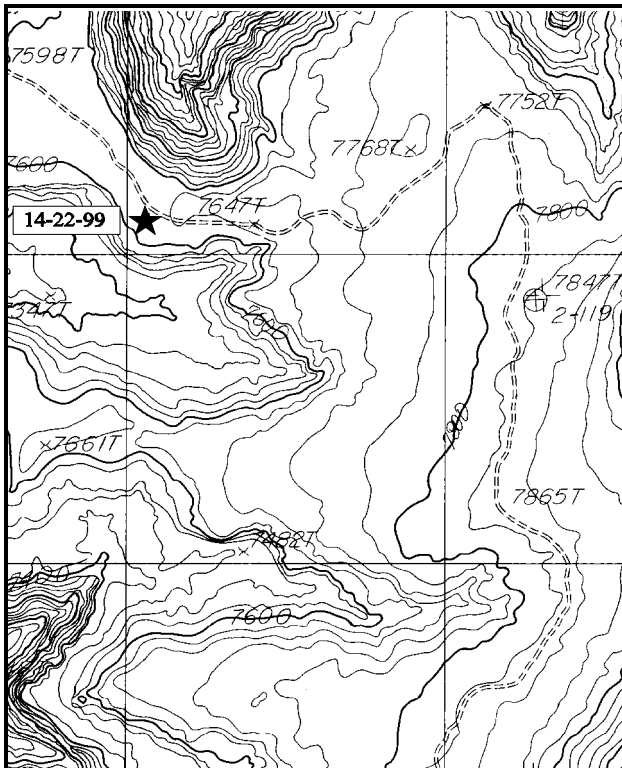
Range type: Chained, Cabled, Seeded P-J.

Compass bearing: frequency baseline 165°M.

Footmark (first frame at) 5 feet, footmarks (frequency belts) line 1 (11 & 71ft), line 2 (34ft), line 3 (59ft), line 4 (95ft).

LOCATION DESCRIPTION

From the west rim of North Long Point, proceed west down the dugway on the Dark Canyon Plateau Road for 5.4 miles. Turn north on the Wild Cow Point Road and go 4.3 miles to a chaining. The transect is on the west side of the road about 100 hundred feet into the chaining, with the 0-foot stake having browse tag #481 attached. All stakes are 3 ½ foot tall green fence posts.



Map Name: Fable Valley

Diagrammatic Sketch

Township 33S , Range 18E , Section 22

UTM 4194647.228 N, 593557 E

## DISCUSSION

### Trend Study No. 14-22 (36-10)

The Wild Cow Point transect samples a chained and seeded area on the northwestern extension of Elk Ridge. The narrow plateau is cut back by numerous canyons, which flow south into Fable Valley or north into Beef Basin. The study area is located on the higher, southwest end of Wild Cow Point at an elevation of 7,600 feet. The aspect is generally west on the level to a gently rolling plateau. A large area has been chained and seeded to crested wheatgrass in the early 1960's. The BLM manages the area with permits for 200 cattle on the point from January to June 15. Deer pellet groups were numerous in 1986 with no elk sign observed. In 1992, some elk pellet groups were encountered. Pellet group data from the site in 1999, estimate 38 deer days use/acre (94 ddu/ha), 1 elk days use/acre (2 edu/ha), and 3 cow days use/acre (7 cdu/ha). Most of the deer pellet groups and all of the cow pats were from last fall. Adequate cover is provided by the surviving pinyon-juniper and both browse and grass forage are plentiful.

The reddish sandy loam soil is derived from a hematite sandstone parent material. Depth of the loose soil varies from 1½ to 3 feet over bed rock with an estimated average effective rooting depth of almost 19 inches. The upper horizon contains very little organic matter and phosphorus is low at just 4.8 ppm. Potassium is also low at 61 ppm. Values less than 10 ppm for phosphorus and 70 ppm for potassium may limit normal growth and development of plants. Litter cover is good, especially where the wheatgrass is dense. Protected microsites support limited cryptogamic activity. Soil pedestaling is evident around bunch grasses and shrubs. Some large bare areas are subject to wind erosion, but overall less than 25% of the ground is bare soil.

Surviving Pinyon and Juniper are regaining their dominance since the chaining. They dominate much of the landscape, although the larger openings support good stands of sagebrush. The pinyon and juniper averaged about 7 feet tall in 1986, with some producing seed. Point quarter data from 1999, estimate 59 pinyon and 40 juniper trees/acre. Average diameter of pinyon is estimated at 4.2 inches while juniper is 11.6 inches. Seventy three percent of the juniper sampled were knocked down trees that were still living. Pinyon and juniper trees comprised 30% of the browse cover in 1992, increasing to 38% in 1999. Overhead canopy cover, first sampled in 1999, averaged 7% for pinyon and 4% for juniper.

The sagebrush community is composed of black sagebrush in association with Wyoming big sagebrush. Utilization was mostly moderate to heavy in 1986 and percent decadency was high at 42% for black sagebrush and 50% for Wyoming big sagebrush. The much larger sample taken in 1992 estimated a similar density for black sagebrush, however density of Wyoming big sagebrush increased from 399 to 2,560 plants/acre. The placement of the much smaller sample size from the 1986 survey greatly over estimated the Wyoming big sagebrush density. Browsing was moderate to heavy on all sagebrush, yet percent decadence has declined from 42% to 11% for black sagebrush and 50% to 20% for Wyoming big sagebrush. Density of black sagebrush and Wyoming big sagebrush declined in 1999 to 3,260 plants/acre and 1,840 plants/acre respectively. Use is mostly light to moderate, with only 27% of the Wyoming big sagebrush displaying heavy use. Vigor is generally good and percent decadency is relatively low. Dwarf rabbitbrush, common in the understory, also shows signs of moderate to heavy hedging.

Crested wheatgrass is the dominant herbaceous species as it provided 40% of the herbaceous cover in 1992, increasing to 54% by 1999. The large bunches form a dense stand over much of the area. Mutton bluegrass and blue grama are also found in good numbers. Forbs are not very common or of real importance on this range. The more common and possibly utilized species include redroot buckwheat, Hoods phlox, low fleabane, and Rocky Mountain penstemon. There is light utilization on some of the other forbs.

## 1986 APPARENT TREND ASSESSMENT

Evidence of wind-scoured depressions are found on some exposed sites. Overall, ground cover is good but does not appear to be increasing. Heavy grazing or removal of vegetation would subject the area to wind erosion and possible gullying and severe soil loss. Currently, soil trend is stable. The area currently provides abundant forage for livestock and big game, but the increasing dominance of young pinyon-Juniper indicates a possible long-term downward trend. Re-treatment of the area may be necessary in the future to maintain productivity, especially if it gains importance as a wintering area for an increasing elk herd.

## 1992 TREND ASSESSMENT

The soil trend for this site is a little more difficult to determine without the help of photographs for the site. They were either lost or overexposed. Percent cover of bare ground has declined from 21% to 16%, but litter cover has decreased from 66% to 46%. Trend for soils on this site is considered stable. The key browse species for the site includes: black sagebrush, Wyoming big sagebrush, and dwarf rabbitbrush. Black sagebrush and dwarf rabbitbrush densities are almost the same with percent decadence for the much more important black sagebrush declining from 42% down to 11%. For Wyoming big sagebrush, the data would indicate that there was a large increase in its density. This is more reflective of the greatly enlarged baseline which has been lengthened from 100 feet to 400 feet, giving a much better representative sample of the vegetation. In this community, there are small groups of Wyoming big sagebrush interspersed throughout the black sagebrush population. This sampling procedure gives a better representative sample of what is present in the plant community. This higher density is more representative of what is present in the sampled community. What is actually more descriptive of the community is that percent decadence has decreased from 50% in 1986 to 20% in 1992. Browse trend is stable to slightly improving for this site. The herbaceous understory trend is stable with a slight increase in nested frequency for grasses and substantial decrease in forb cover. The trend was considered stable because the forb component of the herbaceous understory only makes up 24% of the total herbaceous cover.

### TREND ASSESSMENT

soil - stable

browse - stable to slightly improving

herbaceous understory - stable

## 1999 TREND ASSESSMENT

Trend for soil is stable. Percent bare ground has increased from 16% to 25%, however litter cover has increase from 46% to 50%. The ratio of bare soil to protective cover has remained almost the same (1:3.23 vs 1:3.13). There is some wind and water erosion occurring, but it is localized and not excessive. Trend for browse is considered stable. Population density of both black and Wyoming big sagebrush declined slightly, yet use is lower, vigor is improved, and percent decadence has declined for Wyoming big sagebrush. Recruitment is poor for both species with the number of seedlings and young sampled steadily declining since 1986. For now, there appears to be enough young to maintain the populations of both species of sagebrush. Trend for the herbaceous understory is down slightly. Sum of nested frequency of perennial grasses and forbs declined since 1992. Frequency of the crested wheatgrass, the most dominant grass, has remained similar. As a result, crested wheatgrass now provides 61% of the grass cover and 54% of the total herbaceous cover. Forbs occur infrequently. The only common species sampled is bladderpod and desert phlox.

### TREND ASSESSMENT

soil - stable

browse - stable

herbaceous understory - down slightly

HERBACEOUS TRENDS --  
Herd unit 14 , Study no: 22

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'86	'92	'99	'86	'92	'99	'92	'99
G	Agropyron cristatum	a108	b181	b194	47	68	65	8.47	10.26
G	Bouteloua gracilis	b57	b49	18	24	18	8	2.04	.14
G	Bromus tectorum (a)	-	a-	b8	-	-	3	-	.01
G	Poa fendleriana	b168	ab129	a119	61	50	43	6.62	6.46
G	Sitanion hystrix	b33	b42	a4	14	19	3	.29	.04
Total for Annual Grasses		0	0	8	0	0	3	0	0.01
Total for Perennial Grasses		366	401	335	146	155	119	17.42	16.91
Total for Grasses		366	401	343	146	155	122	17.42	16.93
F	Allium spp.	a2	ab6	b12	2	3	7	.01	.11
F	Antennaria neglecta	b8	ab6	a1	4	2	1	.53	.00
F	Arabis spp.	3	-	3	1	-	2	-	.18
F	Astragalus convallarius	b41	a7	a2	20	4	2	.19	.01
F	Castilleja linariaefolia	-	3	2	-	1	1	.00	.00
F	Calochortus nuttallii	1	-	-	1	-	-	-	-
F	Cordylanthus kingii (a)	a5	b26	ab9	4	11	5	.89	.07
F	Cryptantha flavoculata	2	-	-	1	-	-	-	-
F	Erigeron flagellaris	-	1	2	-	1	1	.03	.03
F	Erigeron pumilus	b32	a3	a1	17	2	1	.01	.00
F	Eriogonum racemosum	b60	a22	a8	28	14	5	.20	.10
F	Eriogonum umbellatum	12	8	10	5	5	5	.10	.10
F	Heterotheca villosa	-	2	-	-	1	-	.00	-
F	Lesquerella rectipes	16	9	15	7	5	7	.20	.58
F	Machaeranthera canescens	a-	b6	13	-	4	5	.02	.10
F	Penstemon strictus	10	3	3	5	2	1	.01	.03
F	Phlox austromontana	46	41	24	23	21	13	1.54	.60
F	Polygonum douglasii (a)	-	b11	a1	-	6	1	.03	.00
F	Senecio multilobatus	b15	a4	a3	8	2	2	.03	.01
F	Thlaspi montanum	b9	a-	-	3	-	-	-	-
F	Townsendia incana	a-	b8	ab5	-	3	2	.06	.01
Total for Annual Forbs		5	37	10	4	17	6	0.91	0.08
Total for Perennial Forbs		257	129	104	125	70	55	2.96	1.88
Total for Forbs		262	166	114	129	87	61	3.88	1.97

Values with different subscript letters are significantly different at % = 0.10

## BROWSE TRENDS --

Herd unit 14 , Study no: 22

Type	Species	Strip Frequency		Average Cover %	
		'02	'09	'02	'09
B	Artemisia nova	47	43	9.66	6.71
B	Artemisia tridentata wyomingensis	36	43	7.38	6.64
B	Chrysothamnus depressus	41	22	2.36	1.02
B	Chrysothamnus viscidiflorus	0	1	-	-
B	Echinocereus spp.	1	0	.00	-
B	Gutierrezia sarothrae	1	4	-	.03
B	Juniperus osteosperma	5	4	3.31	2.82
B	Juniperus osteosperma (chained)	0	0	-	-
B	Opuntia spp.	4	3	.00	.03
B	Pinus edulis	9	8	4.99	6.15
Total for Browse		144	128	27.73	23.43

## CANOPY COVER --

Herd unit 14 , Study no: 22

Species	Percent Cover '09
Juniperus osteosperma	4
Pinus edulis	7

## BASIC COVER --

Herd unit 14 , Study no: 22

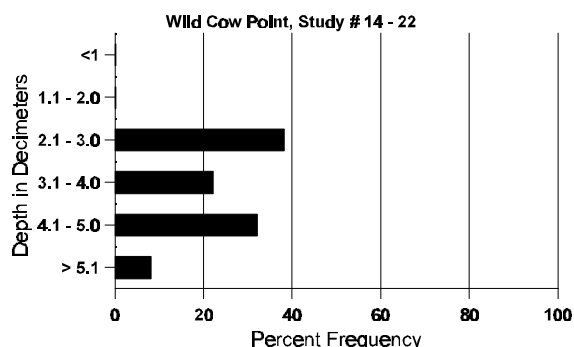
Cover Type	Nested Frequency		Average Cover %		
	'02	'09	'86	'92	'99
Vegetation	307	293	12.25	43.56	38.62
Rock	8	14	.25	1.17	1.22
Pavement	-	6	.25	0	.06
Litter	292	360	65.50	46.42	50.02
Cryptogams	59	97	.50	5.09	2.24
Bare Ground	204	240	21.25	15.97	24.81

## SOIL ANALYSIS DATA --

Herd Unit 14, Study # 22, Study Name: Wild Cow Point

Effective rooting depth (inches)	Temp °F (depth)	pH	%sand	%silt	%clay	%OM	PPM P	PPM K	dS/m
18.5	58.4 (17.7)	7.4	72.4	15.1	12.6	1.6	4.8	60.8	0.5

## Stoniness Index



### PELLET GROUP DATA --

Herd unit 14 , Study no: 22

Type	Quadrat Frequency		Pellet Transect Days Use/Acre (ha)
	'92	'99	
Rabbit	49	39	N/A
Elk	1	2	1 (2)
Deer	29	18	38 (94)
Cattle	1	-	3 (7)

### BROWSE CHARACTERISTICS --

Herd unit 14 , Study no: 22

Artemisia nova																		
A Y G R E		Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
S	86	1	-	-	-	-	-	-	-	-	1	-	-	-	33		1	
	92	10	-	-	2	-	-	-	-	-	12	-	-	-	240		12	
	99	6	-	-	-	-	-	-	-	-	6	-	-	-	120		6	
Y	86	12	6	1	-	-	-	-	-	-	18	1	-	-	633		19	
	92	15	16	8	4	1	-	1	-	-	43	-	2	-	900		45	
	99	14	-	-	-	-	-	-	-	-	14	-	-	-	280		14	
M	86	20	23	26	-	-	-	-	-	-	68	-	1	-	2300	8 13	69	
	92	63	87	23	11	-	-	-	-	-	175	-	9	-	3680	- -	184	
	99	89	25	6	-	-	-	-	-	-	120	-	-	-	2400	11 18	120	
D	86	8	15	42	-	-	-	-	-	-	50	-	2	13	2166		65	
	92	12	11	1	4	-	1	-	-	-	13	-	4	12	580		29	
	99	27	-	1	1	-	-	-	-	-	23	-	-	6	580		29	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	200		10	
% Plants Showing		<u>Moderate Use</u>				<u>Heavy Use</u>				<u>Poor Vigor</u>				<u>%Change</u>				
'86		29%				45%				10%				+ 1%				
'92		45%				13%				10%				-37%				
'99		15%				04%				04%								
Total Plants/Acre (excluding Dead & Seedlings)												'86	5099	Dec:	42%			
												'92	5160		11%			
												'99	3260		18%			

A G R E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches)		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4		Ht.	Cr.	
Artemisia tridentata wyomingensis																		
S	86	2	-	-	-	-	-	-	-	-	2	-	-	-	66		2	
	92	1	-	-	1	-	-	-	-	-	1	1	-	-	40		2	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
Y	86	-	-	2	-	-	-	-	-	-	1	-	-	1	66		2	
	92	3	15	24	1	-	-	5	-	-	43	-	5	-	960		48	
	99	7	-	1	-	-	-	-	-	-	8	-	-	-	160		8	
M	86	-	3	1	-	-	-	-	-	-	4	-	-	-	133	16	15	
	92	4	16	34	1	-	-	-	-	-	55	-	-	-	1100	-	-	
	99	31	23	14	1	-	4	-	-	-	73	-	-	-	1460	20	33	
D	86	1	2	3	-	-	-	-	-	-	6	-	-	-	200		6	
	92	2	7	14	2	-	-	-	-	-	22	-	2	1	500		25	
	99	4	1	6	-	-	-	-	-	-	9	-	-	2	220		11	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	40		2	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		42%			50%			08%			+84%							
'92		30%			56%			06%			-28%							
'99		26%			27%			02%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	399	Dec:	50%			
												'92	2560		20%			
												'99	1840		12%			
Chrysothamnus depressus																		
S	86	1	-	-	-	-	-	-	-	-	1	-	-	-	33		1	
	92	-	1	-	2	-	-	-	-	-	3	-	-	-	60		3	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
Y	86	6	2	-	-	-	-	-	-	-	8	-	-	-	266		8	
	92	2	3	3	7	-	-	1	-	-	14	-	2	-	320		16	
	99	1	-	-	1	-	-	-	-	-	2	-	-	-	40		2	
M	86	37	19	2	-	-	-	-	-	-	57	-	1	-	1933	4	6	
	92	17	22	16	6	1	-	3	-	-	60	-	5	-	1300	-	-	
	99	22	4	7	-	1	1	-	-	-	35	-	-	-	700	5	10	
D	86	3	1	1	-	-	-	-	-	-	3	-	2	-	166		5	
	92	4	13	17	-	-	-	-	-	1	23	-	-	12	700		35	
	99	1	-	5	-	1	-	-	-	-	4	-	-	3	140		7	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	80		4	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		31%			04%			04%			- 2%							
'92		34%			32%			16%			-62%							
'99		14%			30%			07%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	2365	Dec:	7%			
												'92	2320		30%			
												'99	880		16%			

A Y G R E	Form Class (No. of Plants)	Vigor Class									Plants Per Acre	Average (inches) Ht. Cr.		Total				
		1	2	3	4	5	6	7	8	9		1	2		3	4		
Chrysothamnus viscidiflorus																		
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	99	-	-	-	1	-	-	-	-	-	1	-	-	-	20	35	53	1
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%										
'92		00%			00%			00%										
'99		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	-			
												'92	0		-			
												'99	20		-			
Echinocereus spp.																		
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	92	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	92	1	-	-	-	-	-	-	-	-	1	-	-	-	20	-	-	1
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%										
'92		00%			00%			00%										
'99		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	-			
												'92	20		-			
												'99	0		-			
Gutierrezia sarothrae																		
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	99	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	92	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2
	99	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2
M	86	1	-	-	-	-	-	-	-	-	1	-	-	-	33	4	3	1
	92	1	-	-	-	-	-	-	-	-	1	-	-	-	20	-	-	1
	99	2	-	-	-	-	-	-	-	-	2	-	-	-	40	7	11	2
D	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	99	-	-	1	-	-	-	-	-	-	1	-	-	-	20			1
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%			+45%							
'92		00%			00%			00%			+40%							
'99		00%			20%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	33	Dec:	0%			
												'92	60		0%			
												'99	100		20%			



A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Juniperus osteosperma																		
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	92	-	-	-	-	-	-	1	-	-	1	-	-	-	20		1	
	99	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	92	3	-	-	1	-	-	-	-	-	4	-	-	-	80		4	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
	92	3	-	-	-	-	-	-	-	-	3	-	-	-	60	-	-	
	99	3	-	-	-	-	-	-	1	-	4	-	-	-	80	61	63	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	60		3	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%										
'92		00%			00%			00%			-43%							
'99		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	-			
												'92	140		-			
												'99	80		-			
Juniperus osteosperma (chained)																		
Y	86	3	-	-	-	-	-	-	-	-	3	-	-	-	100		3	
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
M	86	2	-	-	-	-	-	-	-	-	2	-	-	-	66	93	89	
	92	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%										
'92		00%			00%			00%										
'99		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	166	Dec:	-			
												'92	0		-			
												'99	0		-			
Opuntia spp.																		
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	92	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
	92	4	-	-	-	-	-	-	-	-	2	-	2	-	80	-	-	
	99	3	-	-	-	-	-	-	-	-	3	-	-	-	60	4	8	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'86		00%			00%			00%										
'92		00%			00%			50%			-25%							
'99		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	-			
												'92	80		-			
												'99	60		-			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Pinus edulis																	
Y	86	7	-	-	-	-	-	-	-	-	7	-	-	-	233		7
	92	4	-	-	-	-	-	1	-	-	5	-	-	-	100		5
	99	3	-	-	-	-	-	-	-	-	3	-	-	-	60		3
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
	92	4	-	-	-	-	-	-	-	-	4	-	-	-	80	-	4
	99	-	-	-	-	-	-	-	5	-	5	-	-	-	100	-	5
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
'86		00%			00%			00%			-23%						
'92		00%			00%			00%			-11%						
'99		00%			00%			00%									
Total Plants/Acre (excluding Dead & Seedlings)													'86	233	Dec:	-	
													'92	180		-	
													'99	160		-	